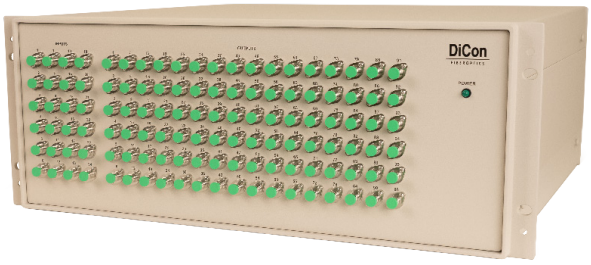
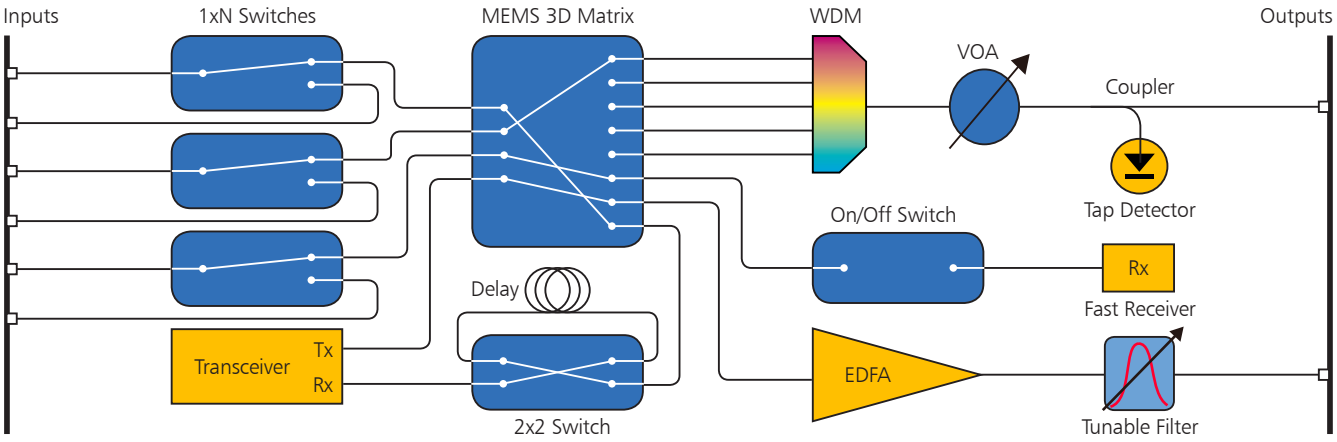
GP600 GENERAL PURPOSE
CONFIGURABLE RACKMOUNT SYSTEM

GP600 OVERVIEW

The GP600 is a flexible rackmount system that can be built with any combination of fiber optic device, such as Optical Switches, WDMs, VOAs, Couplers, Tap Detectors, Transceivers, Delays, EDFAs, Fast Receivers, Tunable Filters, etc.





FEATURES

- Control via a single interface
- Expertly built-to-order
- Available in custom configurations

APPLICATIONS

- Test & Measurement
- Fiber Monitoring
- Commercial & Defense Networks

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GP600 GENERAL PURPOSE
CONFIGURABLE RACKMOUNT SYSTEM

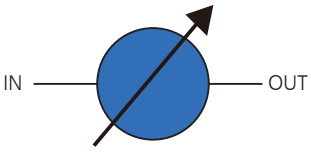
SINGLEMODE VOAS & TAP DETECTORS

TABLE OF CONTENTS

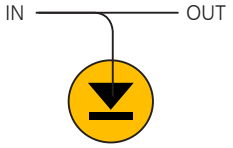
DiCon Fiberoptics' MEMS Singlemode Variable Optical Attenuators (VOAs) allow a precise amount of attenuation to be added to an optical path, while DiCon's Tap Detectors monitor the optical power level. These two can be combined as a Dynamic Power Equilizer (DPE), which allows the optical power after the VOA to be monitored and the attenuation of the VOA adjusted in order to maintain a specified power level.

- Industry proven MEMS technology
- Reliabile, long life design
- High density to minimize rack space

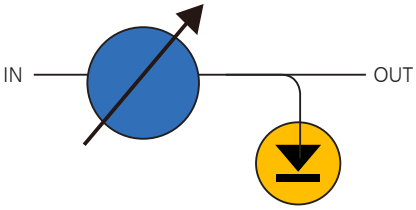
MEMS VOA



TAP DETECTOR



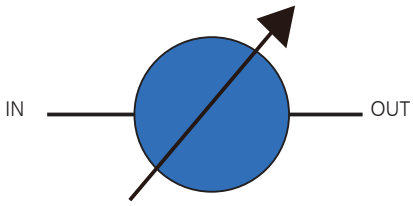
MEMS DPE



GP600 - SINGLEMODE VOAS & TAP DETECTORS

MEMS VOA

DiCon's MEMS Variable Optical Attenuator (VOA) allows for a precise amount of attenuation to be added to an optical path in singlemode fiber applications.



- Industry proven MEMS technology
- Reliable, long life design
- High density to minimize rack space

OPTICAL SPECIFICATIONS (Specifications without connectors at approx. 23°C.)

Parameter	Rating
Insertion Loss, Max. (dB)	0.8 Max.
Tuning Resolution (dB)	0.01
Back Reflection (dB)	-50 Max.
Repeatability (dB)	0.1 Max.
Durability (cycles)	1 Billion Min.
Optical Power	500 mW Max.
Fiber Type	9/125 um Singlemode

	Attenuation (dB)	1290 - 1330 nm	1528 - 1563 nm	1570 - 1610 nm
WDL - Superior Flatness (dB) Max change over the band	0 - 5	0.4 Max.	0.2 Max.	0.4 Max.
	5 - 10	0.6 Max.	0.3 Max.	0.6 Max.
	10 - 20	1.0 Max.	0.7 Max.	1.0 Max.
WDL - Fine Flatness (dB) Max change every 2 nm	0 - 20	0.3 Max.	0.2 Max.	0.3 Max.
PDL (dB)	0 - 10	0.25 Max.	0.15 Max.	0.25 Max.
	10 - 20	0.35 Max.	0.20 Max.	0.35 Max.

GP600 - SINGLEMODE VOAS & TAP DETECTORS

MEMS VOA ORDERING INFORMATION

GP600 - □ - □ - □ - □ - □ / □ - □ - □ - □

Product Code

GP600	GP600 System

Chassis Type

1U	1U Rackmount
2U	2U Rackmount
4U	4U Rackmount
4E	4U Extended Rackmount
B	Benchtop Chassis

Product Type

MA/T	MEMS Attenuator / Transparent Type
MA/O	MEMS Attenuator / Opaque Type

Configuration

X	X = # of Channels

Attenuation Range

30	30 dB min.
X	Specify X dB min. (X ≤ 40)

WDL Type

S	Superior Flatness
F	Fine Flatness

Wavelength Range

13	1290 - 1330 nm
15	1528 - 1563 nm
16	1570 - 1610 nm

Fiber and Jacket Type

9	9/125 um Singlemode Fiber

Connector Type

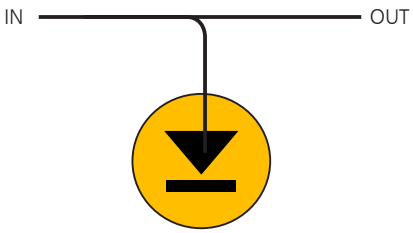
FC	FC/UPC
FC/APC	FC/APC
LC	LC/UPC
LC/APC	LC/APC
SC	SC/UPC
SC/APC	SC/APC
ST	ST/UPC
E2000/APC	E2000/APC

Connector Location

F	Front Panel
R	Rear Panel

GP600 - SINGLEMODE VOAS & TAP DETECTORS

TAP DETECTORS



DiCon's Singlemode Tap Detectors enable the optical power level to be monitored in singlemode fiber applications. This is done by using a fused coupler to tap off a portion of the signal, and deliver it to a photodetector.

- Ideal for Power Monitoring
- Range of Tap Ratios Available
- High Density to Minimize Rack Space

OPTICAL SPECIFICATIONS (Specifications without connectors at approx. 23°C.)

Parameter	Rating			
Tap Ratio	1%	2%	5%	10%
Insertion Loss, Max. (dB)	0.3	0.4	0.5	0.8
Standard Sensitivity Measureable Input Power (dBM)	-25 to 20	-28 to 17	-32 to 13	-35 to 10
High Sensitivity Measureable Input Power (dBM)	-60 to -5	-63 to -8	-67 to -12	-70 to -15
Relative Measurement Accuracy (dBM)	± 0.3 Max. (standard sensitivity)			
Measurement Resolution (dBM)	0.1			
Back Reflection (dB)	-50 Max.			
PDL (dB)	0.1 Max.			
Fiber Type	9/125 um Singlemode			

GP600 - SINGLEMODE VOAS & TAP DETECTORS

TAP DETECTORS ORDERING INFORMATION

GP600 - □ - □ - □ - □ - □ - □ - □ - □

Product Code

GP600	GP600 System

Chassis Type

1U	1U Rackmount
2U	2U Rackmount
4U	4U Rackmount
4E	4U Extended Rackmount
B	Benchtop Chassis

Product Type

TD	Tap Detector

Configuration

X/Y	X = # of Channels, Y = Tap Ratio %

Sensitivity

H	High
S	Standard

Wavelength Range

13	1290 - 1330 nm
15	1528 - 1563 nm
16	1570 - 1610 nm

Fiber and Jacket Type

9	9/125 um Singlemode Fiber

Connector Type

FC	FC/PC
FC/APC	FC/APC
LC	LC/PC
LC/APC	LC/APC
SC	SC/PC
SC/APC	SC/APC
ST	ST/PC
E2000/APC	E2000/APC

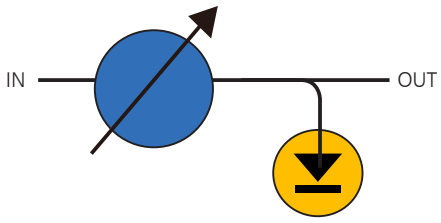
Connector Location

F	Front Panel
R	Rear Panel

GP600 - SINGLEMODE VOAS & TAP DETECTORS

MEMS DPE

DiCon's MEMS Dynamic Power Equalizer (DPE) combines a MEMS VOA with a Tap Detector. This allows the optical power after the VOA to be monitored and the attenuation of the VOA adjusted in order to maintain a specified power level.



- Multi-Channel Capable
- Proven, Reliable Design
- Closed or Open Loop Control

OPTICAL SPECIFICATIONS (Specifications without connectors at approx. 23°C.)

Parameter	Rating			
Tap Ratio	1%	2%	5%	10%
Insertion Loss, Max. (dB)	1.1	1.2	1.6	1.8
Dynamic Power Range (dBM)	-25 to 20	-28 to 17	-32 to 13	-35 to 10
Closed Loop Output Accuracy (dB)	± 0.3 Max			
Tuning Resolution (dB)	0.01 Max.			
Back Reflection (dB)	-50 Max.			
Optical Power	200 mW Max.			
Fiber Type	9/125 um Singlemode			

	Attenuation (dB)	1290 - 1330 nm	1528 - 1563 nm or 1570 - 1610 nm
WDL - Superior Flatness (dB) Max change over the band	0 - 10	0.6 Max.	0.5 Max.
	10 - 20	1.0 Max.	0.7 Max.
WDL - Fine Flatness (dB) Max change every 2 nm	0 - 20	0.3 Max.	0.2 Max.
PDL (dB)	0 - 10	0.25 Max.	0.15 Max.
	10 - 20	0.35 Max.	0.20 Max.

GP600 - SINGLEMODE VOAS & TAP DETECTORS

MEMS DPE ORDERING INFORMATION

GP600 - □ - □ - □ - □ - □ / □ - □ - □ - □

Product Code
GP600 GP600 System

Chassis Type
1U 1U Rackmount
2U 2U Rackmount
4U 4U Rackmount
4E 4U Extended Rackmount
B Benchtop Chassis

Product Type
ME/T MEMS DPE / Transparent Type
ME/O MEMS DPE / Opaque Type

Configuration
X/Y X = # of Channels, Y = Tap Ratio %

Attenuation Range
30 30 dB min.
X Specify X dB min. (X ≤ 40)

WDL Type
S Superior Flatness
F Fine Flatness

Wavelength Range
13 1290 - 1330 nm
15 1528 - 1563 nm
16 1570 - 1610 nm

Fiber and Jacket Type
9 9/125 um Singlemode Fiber

Connector Type
FC FC/UPC
FC/APC FC/APC
LC LC/UPC
LC/APC LC/APC
SC SC/UPC
SC/APC SC/APC
ST ST/UPC
E2000/APC E2000/APC

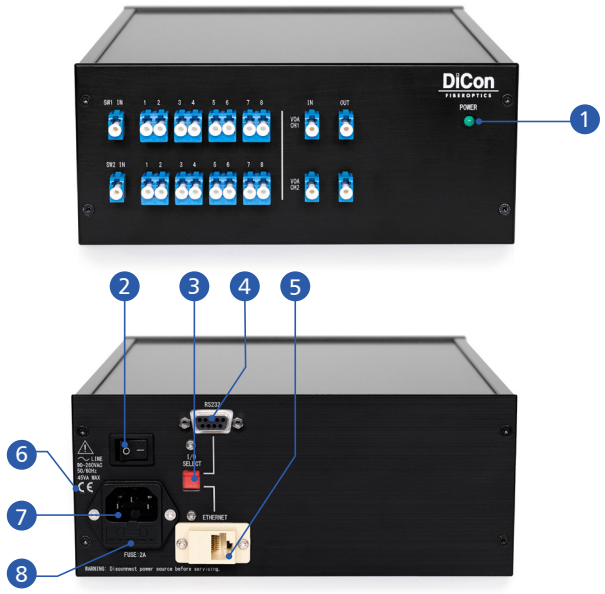
Connector Location
F Front Panel
R Rear Panel

GP600 - CHASSIS

ELECTRICAL SPECIFICATIONS

Parameter		Rating
Control	Interface	Ethernet 10/100 Base T and RS-232
	Ethernet/RS-232 Switch	Manual slide switch on rear to select control method
Power Supply	Voltage	90 - 264 VAC
	Frequency	47 - 63 Hz
	On/Off Switch	2-position toggle on rear
Connectors	Ethernet	RJ45 female receptable
	RS-232	DB9 female receptacle
	Power Supply	IEC 60320 C13 female receptacle (standard AC connector)
	Location	Rear of chassis
Power LED	On State	GP600 is on (Receiving power and power switch is in on position)
	Off State	GP600 is off (Not receiving power, or power switch is in off position)
	Location	Front of chassis

Benchtop Chassis



1 Power LED
2 Rocker Switch (Toggle to turn unit on and off)
3 I/O Select (Switch used to select the one active interface)
4 RS-232, DB9 Connector
5 Ethernet, RJ45 Connector
6 CE Mark
7 Power Cord Inlet
8 Replaceable Fuse

GP600 - CHASSIS

MECHANICAL SPECIFICATIONS (Dimensions in inches (in) are approximate for reference.)

Chassis	Height		Width		Depth	
	mm	in	mm	in	mm	in
1U	44	1.7	483	19	342	13.5
2U	88	3.5	483	19	435	17.1
4U	177	7.0	483	19	435	17.1
4U Extended (4E)	177	7.0	483	19	554	21.8
Benchtop (B)	88	3.5	210	8	250	9.8

MAXIMUM # OF CONNECTORS

Chassis Size	Panel	FC FC/APC	ST ST/APC	SC SC/APC	LC LC/APC
1U	Front	43	43	57	85
	Rear	11	11	21	24
2U	Front	73	73	89	145
	Rear	55	55	72	121
4U	Front	225	225	240	381
	Rear	190	190	201	288
Benchtop	Front	37	37	60	81
	Rear	24	24	32	56

ENVIRONMENTAL SPECIFICATIONS

Parameter	Rating
Operating Temp	0 to 50°C
Storage Temp	-20 to 60°C
Relative Humidity	0% to 80% non-condensing